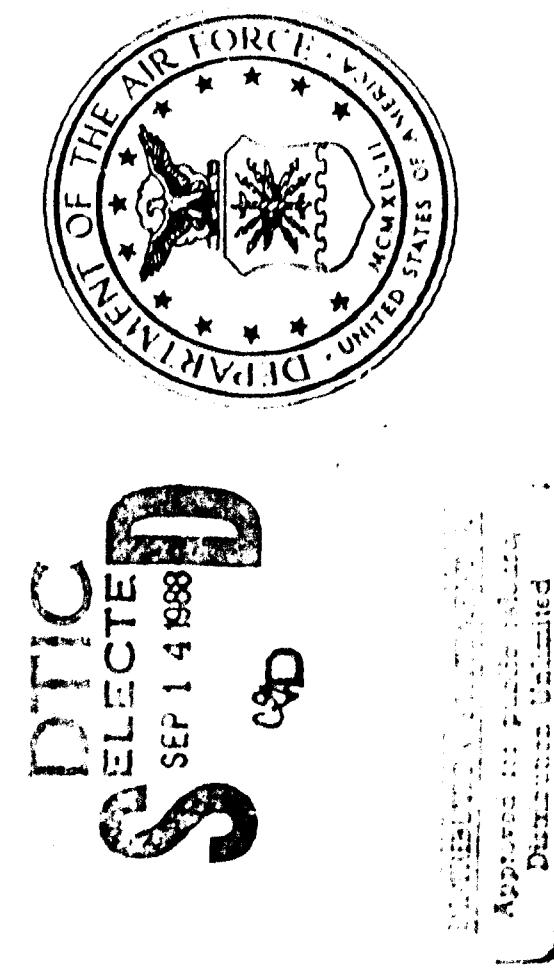


AD-A198 262

**DEPARTMENT OF THE
AIR FORCE**

**JUSTIFICATION OF AMENDED FISCAL YEARS 1988/1989
BIEENNIAL BUDGET ESTIMATES
SUBMITTED TO CONGRESS FEBRUARY 1988**



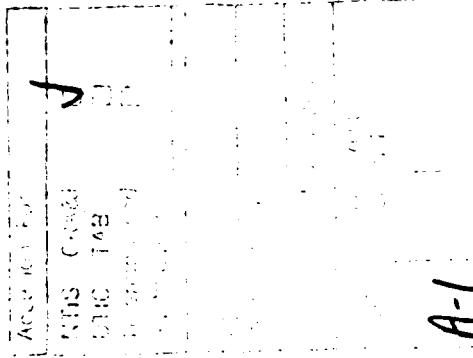
Missile Procurement, Air Force

DEPARTMENT OF THE AIR FORCE

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MISSILE PROCUREMENT, AIR FORCE

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A-1

MISSILE PROCUREMENT, AIR FORCE

For construction, procurement, and modification of missiles, spacecraft, rockets, and related equipment, including spare parts and accessories therefor, ground handling equipment, and training devices; expansion of public and private plants, Government-owned equipment and installation thereof in such plants, erection of structures, and acquisition of land, for the foregoing purposes, and such lands and interests therein, may be acquired and construction prosecuted thereon prior to approval of title; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes including rents and transportation of things. [\$7,290,771,000] \$8,158,000,000 to remain available for obligation until September 30, [1990] 1991.

Chas. W. L. Clegg, Jr.,
Air Force procurement. (SACO) ✓

Missile Procurement, Air Force
Program and Financing (in thousands of dollars)

18 Feb 88

Identification code	57-3020-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)			Obligations		
		1987 actual	1988 est.	1989 est.	1987 actual	1988 est.	
Program by activities:							
Direct program:							
00.0101	Ballistic missiles	1,140,699	913,150	863,701	1,286,869	1,286,377	
00.0201	Other missiles	2,281,674	1,973,627	2,417,471	1,896,007	2,206,680	
00.0301	Modification of in-service missiles	138,840	95,175	89,021	126,152	143,324	
00.0401	Spares and repair parts	295,827	164,246	254,314	354,275	232,600	
00.0501	Other support	4,097,344	4,203,871	4,533,493	4,051,328	3,806,502	
00.9101	Total direct program	7,954,384	7,350,071	8,158,000	7,696,631	7,675,491	
01.0101	Reimbursable program	86,345	124,000	39,000	86,646	129,482	
10.0001	Total	8,040,729	7,474,071	8,197,000	7,777,277	7,804,973	
Financing:							
Offsetting collections from:							
11.0001	Federal funds(-)	-84,634	-122,300	-37,300	-40,346	-122,300	
13.0001	Trust funds(-)	-1,711	-1,700	-1,700	2,791	-1,700	
17.0001	Recovery of prior year obligations				-121,110	-1,700	
Unobligated balance available, start of year:							
21.4002	For completion of prior year budget plans				-3,271,876	-3,353,610	
21.4003	Available to finance new budget plans	-871,838	-230,546	-230,546	-671,838	-230,546	
21.4007	Reprogramming from/to prior year budget plan	-254,040	12,500	12,500	-531,365	10,800	
22.4001	Unobligated balance transferred to other acc	-531,365	10,800	10,800			
Unobligated balance available, end of year:							
24.4002	For completion of prior year budget plans				3,353,610	3,035,208	
24.4003	Available to finance subsequent year budget	230,546	230,546	230,546	33,131	3,225,421	
25.0001	Unobligated balance lessing	33,131					
39.0001	Budget authority	8,760,818	7,142,825	8,158,000	6,760,818	7,142,825	
40.0001	Budget authority:						
40.0017	Appropriation	7,446,718	7,290,771	8,158,000	7,446,718	7,290,771	
40.0017	Appropriation rescinded	-671,300	-174,046	-174,046	-671,300	-174,046	
41.0001	Transferred to other accounts (-)	-17,600			-17,600		
42.0001	Transferred from other accounts	3,000	26,100	26,100	3,000	26,100	
43.0701	Appropriation (adjusted)	8,760,818	7,142,825	8,158,000	6,760,818	7,142,825	
Relation of obligations to outlays:							
71.0001	Obligations incurred, net				7,739,722	7,680,973	
72.4001	Obligated balance, start of year				8,006,915	9,637,070	
74.4001	Obligated balance, end of year				-9,637,070	10,721,943	
77.0001	Adjustments in expired accounts				13,424	-10,953,030	
78.0001	Adjustments in unexpired accounts				-121,110		

Missile Procurement, Air Force
Program and Financing (In Thousands of dollars)

18 Feb 88

	1987 actual	1988 est.	1989 est.
Identification code	57-3020-0-1-051		
90.0001	6,001.881	6,596.100	7,736.700
Outlays			

18 Feb 88

Missile Procurement, Air Force
Object Classification (in Thousands of dollars)

	1987 actual	1988 est.	1989 est.
Identification code 57-3020-0-1-051			
Direct obligations:			
131.001 Equipment	7,690,631	7,675,491	7,967,787
199.001 Total Direct obligations	7,690,631	7,675,491	7,967,787
Reimbursable obligations:			
231.001 Equipment	86,646	129,482	39,000
299.001 Total Reimbursable obligations	86,646	129,482	39,000
899.901 Total obligations	7,777,277	7,804,973	8,006,787

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ACTIVITY: 1. Ballistic Missiles

(In Thousands of Dollars)	
FY 1989 Amended Estimate	\$ 863,701
FY 1989 Change	\$ -676,542
FY 1989 Initial Estimate	\$ 1,540,243
FY 1988 Estimate	\$ 913,150
FY 1987 Actual	\$ 1,140,699

SECTION I - PURPOSE AND SCOPE

This activity provides for complete operational intercontinental ballistic missiles, including the airframe structure and installed power units, communications guidance and control equipment, re-entry vehicle (excluding nuclear payloads), instruments and auxiliary equipment installed in the missiles, and penetration aids. It also provides for peculiar support equipment in direct support of operational ballistic missiles including ground guidance and control systems, equipment to maintain the operational status of the system, specialized ground handling equipment, and system trainers. The ground equipment is used to transport, assemble and disassemble, maintain, checkout, launch, and guide ballistic missiles. Specialized training equipment includes system trainers for proficiency training of maintenance and operator crews. This activity also provides for the modernization of the ballistic missile launch and launch control facilities and the integration of new equipment into the launch control center. It includes hardware, training equipment, data and site activation effort required to modernize ballistic missile facilities. Also included is replacement equipment for ballistic missile weapon systems. Replacement equipment requirements provide for peculiar support equipment for out-of-production systems, equipment common to several systems, and equipment required by specialized repair activities.

SECTION 11 - JUSTIFICATION OF FUNDS REQUESTED

PEACEKEEPER

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
12	864,000	12	806,980

The Peacekeeper is a four-stage ICBM having multiple independently targetable warheads with much greater accuracy than previous ballistic missiles. Present plans are for deployment of the first 50 Peacekeeper missiles in Minuteman silos. Peacekeeper subsystems will provide the following improvements over existing Minuteman missiles: an advanced guidance set for improved accuracy; an advanced solid propellant; lightweight motor cases; advanced rocket motor nozzles. Funds were appropriated in 1988 for procurement of 12 missiles, and associated support equipment. The FY 1989 request is for 12 missiles, and associated support equipment.

REPLACEMENT EQUIPMENT - STRATEGIC (BALLISTIC)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	49,150	-	56,721

Replacement equipment includes items to replace peculiar and common support equipment worn out or damaged beyond economical repair and common items required for new ballistic missile systems entering the inventory. It provides for the replacement of organizational and base level missile support equipment.

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
	\$ -	\$ -	\$ 921
	\$ 49,150		\$ 55,800
		\$ -	\$ 56,721

Peacekeeper
LGM-30F/G Minuteman 11/111

TOTAL

ACTIVITY: 2. Other Missiles

		(In Thousands of Dollars)
FY 1989	Amended Estimate	\$2,417,471
FY 1989	Change	-422,412
FY 1989	Initial Estimate	2,839,883
FY 1988	Estimate	1,973,627
FY 1987	Actual	2,281,674

SECTION I - PURPOSE AND SCOPE

This activity provides funds for procurement of strategic air-to-ground cruise missiles, tactical ground-to-ground cruise missiles, tactical air-to-air, air-to-ground and ground-to-air missiles, target drones, missile replacement equipment and industrial facilities. Weapon system cost includes flyaway costs (airframe, propulsion equipment, electronics and armament), peculiar support equipment (PSE), system peculiar training equipment and publications, and technical data.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1989 budget request includes funds for the procurement of the Advanced Cruise Missile, Have Flag, Tacit Rainbow, Ground-Launched Cruise Missile requirements due to the Intermediate Range Nuclear Forces (INF) Treaty, MAVERICK, HARM, target drones, SPARROW, SIDEWINDER and Advanced Medium Range Air-to-Air Missile (AMRAAM), HAVE NAP, missile replacement equipment, and industrial facilities.

Strategic Missiles

Advanced Cruise Missile - Information concerning this program is included in classified budget documentation material.

Have Flag - Information concerning this program is included in classified budget documentation material.

Tacit Rainbow - Information concerning this program is included in classified budget documentation material.

HAVE_NAP

(\$ In Thousands)			
FY 1988	QTY	AMOUNT	FY 1989
	12	8,347	

HAVE_NAP is an air-to-ground, medium range, precision guided missile currently operational in the Israeli Air Force. The weapon system is planned to be employed on Strategic Air Command (SAC) B-52's as a standoff conventional weapon against designated point targets.

Tactical Missiles**AIM-7M SPARROW**

(\$ In Thousands)			
FY 1988	QTY	AMOUNT	FY 1989
	558	84,462	354

The AIM-7M is a rocket propelled, high-reliability, air-to-air and ship-to-air missile equipped with all-weather 360-degree attack capability. The guidance is accomplished through a solid state radar homing system with a dual mode, continuous wave or pulse doppler. Propulsion is provided by a dual thrust solid propellant rocket motor. The missile has a blast-fragmentation warhead. The FY 1988 program is \$84.5 million for procurement of 558 missiles; The FY 1989 request is for 354 missiles at \$56.1 million.

AIM-9M SIDEWINDER

(\$ In Thousands)			
FY 1988	QTY	AMOUNT	FY 1989
	956	61,051	760

Developed as a joint Navy/Air Force effort, the AIM-9M is the latest version of heat-seeking, infrared missiles forming the SIDEWINDER family. The AIM-9M is a short-range, air-to-air missile designated to retain all demonstrated guidance performance characteristics of the AIM-9L, while significantly reducing operational limitations of the AIM-9L when used against infrared countermeasures and clutter backgrounds. The FY 1988 program in the amount of \$61.1 million is for procurement of 956 missiles. The FY 1989 program procures 760 missiles for \$48.3 million. These missiles will increase the USAF inventory of the preferred AIM-9M missile toward the War Reserve Material objective. Additionally, these missiles will replace AIM-9L's currently allocated to air superiority missions. The AIM-9L's are required to provide self-defense for the A-7, A-10, F-4 and F-111 aircraft.

AGM-65D/G MAVERICK

(\$ In Thousands)		
FY 1988	FY 1989	FY 1989
QTY	AMOUNT	QTY
2,700	290,000	2540
		260,410

The AGM-65D and G missiles are rocket-propelled, air-to-surface, precision-guided tactical missiles with a "stand-off" launch and leave capability. The missiles are guided by tracking signals developed from the naturally occurring thermal energy of the target. The AGM-65D has a (125 lb) conical shaped charge warhead, which is detonated by a contact fuze mechanism. The AGM-65G is essentially the same as the "D" version only it employs a larger (300 lb) high explosive warhead. Both the AGM-65D and G missiles incorporate imaging infrared guidance compatible with all TV MAVERICK capable aircraft and target acquisition systems that are being planned for tactical aircraft. The FY 1988 program in the amount of \$290.0 million provides for production of 2,700 MAVERICK missiles from both the primary contractor and second manufacturer. In FY 1989, the Air Force continues the competitive buy program with a buy of 2,540 missile at \$260.4 million.

AGM-88A HARM

(\$ In Thousands)		
FY 1988	FY 1989	FY 1989
QTY	AMOUNT	QTY
1,645	367,000	893
		216,135

The Advanced High-Speed Anti-Radiation Missile (HARM) is an air-to-surface missile that is guided to enemy radar sites by homing in on emitting signals. HARM characteristics include software flexibility, inflight retargeting, high speed, large launch envelope, wide band coverage in a single head, high sensitivity and compatibility with both Air Force and Navy tactical aircraft. The increased sophistication, concentration and lethality of enemy ground based, radar guided, missile and anti-aircraft artillery systems threaten the ability of tactical aviation to accomplish its mission and survive. HARM provides a lethal counter to this threat. In FY 1988, the Air Force plans to procure 1,645 missiles for \$367,000. The FY 1989 Air Force program of \$216.1 million procures 893 missiles.

Advanced Medium Range Air-to-Air Missile (AMRAAM)

(\$ In Thousands)			
FY 1988	FY 1989	FY 1988	FY 1989
QTY	AMOUNT	QTY	AMOUNT
400	670,000	1470	825,297

Developed jointly by the Air Force and Navy, the AMRAAM is an air-to-air missile with significant improvements in operational utility and combat effectiveness over the AIM-7F/M Sparrow missile. It is a radar guided, all-weather, all-environment, beyond-visual-range, air-to-air missile compatible with the F-14, F-15, F-16 and F-18. It will have a performance envelope significantly improved over the AIM-7F/M, increased missile velocity, a "launch and maneuver" employment capability, and the capability for multiple target attack during a single intercept. The FY 1988 program of \$670.0 million buys 400 missiles. The FY 1989 funding request is for production of 1470 missiles and continuation of the productibility enhancement program.

BGM-109 GROUND LAUNCHED CRUISE MISSILE (GLCM)

(\$ In Thousands)			
FY 1988	FY 1989	FY 1988	FY 1989
QTY	AMOUNT	QTY	AMOUNT
-	-	4,100	603

The GLCM is a small, long-range, all-weather, accurate, ground-to-ground cruise missile. A GLCM mobile flight is comprised of four transporter erector launchers, which each carry four missiles, and two launch control centers. In accordance with the INF Treaty agreement, GLCM will be deactivated in FY 1990/1991. FY 1988 and 1989 funds will compensate the contractor for interruptions at his facility due to treaty verification activities.

Target Drones

(\$ In Thousands)			
FY 1988	FY 1989	FY 1988	FY 1989
QTY	AMOUNT	QTY	AMOUNT
48	11,040	58	24,179

Target drones are remotely piloted vehicles used to simulate threat aircraft during test and evaluation of air-to-air missiles. Both full-scale and subscale targets with associated augmentation, scoring and countermeasures devices are required. Funds in the amount of \$11.0 million requested for FY 1988 will provide for the procurement of 48 subscale target drones. The FY 1989 request for \$24.2 million will buy 58 full-scale (QF-106) target drones. This is the first year of QF-106 production which continues the procurement of full-scale drones. The QF-100 had previously satisfied full-scale target requirements, with final procurement in FY 1987 when the supply of F-100 aircraft for conversion was depleted.

Industrial Facilities

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	16.017	-	10.731

These requirements represent the Air Force's effort, in cooperation with industry, to ensure the defense industrial base is capable of producing peacetime weapon systems in a cost-effective and efficient manner. Industrial facilities includes the missile/le/space sector segment of an industrial base program that ensures the ability of the base to accelerate deliveries in times of national emergencies in order to meet sustainability requirements. It includes funding for a broad range of industrial acquisition tools that also drastically impact peacetime procurement. Modernization, productivity, the operations at the 13 government owned-contractor operated plants and at hundreds of civilian contractor locations that all make up the defense industrial base are becoming a more and more essential ingredient to national deterrence. Studies by the Services and the Joint Chiefs of Staff have repeatedly proven that the industrial base will not support mobilization demands in a timely manner without some advance analysis and preparation. In FY 1988 and FY 1989, \$16.0 million and \$10.7 million are required to support facilities projects, industrial base planning, and industrial productivity and responsiveness.

Replacement Equipment

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	7.285	-	5.153

Requirements for replacement equipment provide for peculiar support equipment for weapon systems that are no longer in production, equipment common to several systems, and equipment required by specialized report activities. In FY 1988 and FY 1989 the funding is required to procure replacement equipment for the AIM-7 SPARROW, AIM-9 SIDEWINDER, AGM-65A Maverick, AGM-69A SRAM, HARMON and ALOM.

ACTIVITY: 3. Modification of In-service Missiles

(In Thousands of Dollars)	
FY 1989 Amended Estimate	\$ 89,021
FY 1989 Change	- 36,688
FY 1989 Initial Estimate	- 125,709
FY 1987 Estimate	- 95,175
FY 1986 Actual	- 138,840

SECTION I - PURPOSE AND SCOPE

This activity provides for modification of missile systems and drones, direct ground support equipment, missile training equipment, and components for this equipment. These costs include modification kits, revised handbooks, and engineering effort. These programs are designed to improve reliability, enhance performance, and increase maintainability by incorporating approved modifications resulting from technical advances, service use, and continuing test programs.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1988 and FY 1989 missile modification program consists of Class IV modifications necessary for safety improvements, extension of service life or correction of material deficiencies, and Class V modifications that incorporate changes to enhance the operational capability of the fielded systems. Several Class III update modifications are also programmed to bring fielded missiles into line with production line configuration. Advances in technology and weapon system service life extensions necessitate the modification of in-service missile systems to enable strategic, tactical, and support forces to maintain superiority over hostile forces.

Advanced Cruise Missile Modification

This is a classified program requiring special access. Details are provided separately.

Classified Programs Modification

These are classified programs requiring special access. Details will be provided separately.

LGM-30 Minuteman III/IV Modification.

(\$ In Thousands)	
FY 1988	FY 1989
\$ 80,000	\$73,194

The FY 1989 program requests is \$73.2 million for Minuteman Class IV and V modifications. On-going Class IV modifications include the final year of the Minuteman II guidance set modification, and continuation of the Splice Case and Launch Control Facility (LCF) BMP Hardness Protection modifications. Included also is the initiation of a modification to install special storage containers in the Launch Control Centers to prevent personnel injury and equipment damage in the case of earth tremors, as well as two small trainer peculiar modifications.

AGM-88A HARM Modification.

(\$ In Thousands)	
FY 1988	FY 1989
\$2,245	\$2,200

The FY 1989 program provides \$2.2 million to correct deficiencies revealed during operational testing and initial use. These corrections are incorporated into the production line at the earliest time, but systems that could not be corrected while in production must be corrected through the modification process.

AGM-86A Air Launched Cruise Missile Modification.

(\$ In Thousands)	
FY 1988	FY 1989
\$7,381	\$6,055

The FY 1989 program requests \$6.1 million to continue Class III, and V modifications initiated previously. Class IV modifications initiated in FY 89 are low dollar (less than \$.9M) modifications for reliability and supportability updates.

B3M-109. Ground Launched Cruise Missile Modification.

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
\$	-	\$3,200

Due to the Intermediate Nuclear Forces (INF) Treaty the modifications for GLOM scheduled in FY 1988 have been canceled. The \$3.2 million requested in FY 1989 provides for a modification to the GLOM Launch Control Center (LCC) to reduce it's acoustic signature. The LCC's will remain in the Air Force inventory beyond the deactivation of the GLOM missiles.

Peacekeeper Modifications.

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
\$	\$1,311	\$1,733

The FY 1988 and FY 1989 programs provide \$1.3 million and \$1.7 million, respectively, for miscellaneous Class IV reliability and maintainability modifications.

Other Modifications Under \$2.0 Million).

	(\$ In Thousands)	
	<u>FY 1988</u>	<u>FY 1989</u>
\$	\$232	\$198

The FY 1988 and FY 1989 programs provide \$.2 million, respectively, for miscellaneous Class IV modifications on the AIM-7F SPARRON, to improve reliability, maintainability and correct material deficiencies.

ACTIVITY: 4. Spares and Repair Parts

(In Thousands of Dollars)	
FY 1989 Amended Estimate	\$254,314
FY 1989 Change	-51,017
FY 1989 Initial Estimate	305,331
FY 1989 Estimate	164,248
FY 1987 Actual	295,827

SECTION I - PURPOSE AND SCOPE

This activity provides for procurement of initial and replenishment spares and repair parts for ballistic missiles, other missiles, and target drones. Included are related provisioning documentation and spares for missile modification programs, peculiar air support equipment and training equipment.

SECTION II - JUSTIFICATION OF FUNDS REQUESTED

The FY 1989 funds are required for initial spares for weapon systems in production and for replenishment spares to maintain and test existing weapon systems. Initial spares funding requirements are determined by applying standard factors which are based on historical experience. The factors are applied in accordance with type of weapon system, category of support (e.g. air vehicle, support equipment), number of weapon systems in production, production lead times, and recurring flyaway costs. Initial spares requirements are validated in the weapon system provisioning process for a specified support period. Replenishment spares include components and repair parts required for the continued support of missiles, drones and related support equipment maintained in the operational inventory. Requirements for replenishment spares are based on a computational process which utilizes actual consumption, lead time, on hand inventory, procurement cost, and weapon system program data. Through management review, the results are adjusted as appropriate to reflect any changes in support requirements. Included within replenishment spares are such items as replacement ballistic missile motors, ballistic missile telemetry vehicles for operational testing and evaluation, tactical missile telemetry packs for weapon system evaluation, and guidance and control units for all categories of missiles.

TOTAL BUDGET ACTIVITY 4:

SPARES AND REPAIR PARTS

(\$ In Thousands)

	FY 1988	FY 1989
	164,248	254,314

INITIAL SPARES

	FY 1988	FY 1989
AIM-9L Sidewinder	39	18
AIM-120- Advanced Medium Range Air-to-Air Missile (AMRAAM)	3,127	5,740
AGM-65D Imaging Infrared (IIR) Maverick	8,348	9,804
AGM-88A High Speed	8,820	6,660
Anti Radiation Missile (HARM)	-	-
BGM-109 Ground Launched Cruise Missile (GLCM)	9,653	1,663
LGM-118A Peacekeeper	315	304
Target Drones	9,567	5,000
Classified Programs	39,869	29,189
Subtotal		

MODIFICATION INITIAL SPARES

AIM-9 SIDEWINDER	248	254
LGM-30 F/G MINUTEMAN 11/111	688	712
OTHER PROGRAMS	2,242	2,143
SUBTOTAL	3,178	3,109
TOTAL INITIAL SPARES	43,047	32,298

REPLENISHMENT SPARES

	1988	1989
AIM-7 Sparrow	5,348	3,434
AIM-9 Sidewinder	7,443	11,646
AIM-120 AMRAAM	-	5,410
AGM-65 Maverick	5,934	2,506
AGM-69A Short Range Attack Missile (SRAM)	2,578	2,506
AGM-84 Harpoon	739	1,000
AGM-86 ALCM	3,020	5,274
AGM-88A HARM	170	2,299
BGM-109 GLOW	3,807	2,000
RAPIER	7,146	14,900
LGM-30 MINUTEMAN	79,023	135,895
LGM-118A Peacekeeper	9,735	27,319
ACM/BGM-34 Firebee	430	35
TARGET DRONES (QM-107 and QF 100)	1,027	983
CLASSIFIED PROGRAM*	-	8,300
Total Replenishment Spares	<u>121,201</u>	<u>222,016</u>
TOTAL BUDGET ACTIVITY 4: SPARES AND REPAIR PARTS	164,248	254,314

ACTIVITY: 5. Other Support

(In Thousands of Dollars)		
FY 1989 Estimate	\$4,533,493	
FY 1989 Change	-1,691,443	
FY 1989 Initial Estimate	6,224,936	
FY 1988 Estimate	4,203,871	
FY 1987 Actual	4,097,344	

SECTION I - PURPOSE AND SCOPE

This activity provides for space programs and special programs. Space programs provide launch vehicles, satellites, peculiar ground support equipment, and miscellaneous launch support requirements other than those chargeable to the Operations and Maintenance appropriation. Special programs are of a sensitive nature and require special access.

SECTION II - IDENTIFICATION OF FUNDS REQUESTED

The FY 1988 appropriation of \$4,203,871 includes \$2,082,541 for operational space programs and \$2,121,330 for special programs. The FY 1989 request of \$4,533,493 includes \$1,664,474 for operational space programs and \$2,869,019 for special programs.

Communications Security (COMSEC)

(\$ In Thousands)		
FY 1988	QTY	AMOUNT
	23,682	19,646

This program provides communications security equipment for all critical spaceborne communications systems. Funds requested in this line procure COMSEC products for use in operational space programs. This program is an integral part of the national COMSEC program administered by the National Security Agency. FY 1988 and FY 1989 funds provide for the procurement of peculiar anti-jam, data and command authentication encryption/decryption, authentication/authorization, and weapon system security communication equipment for space and satellite programs.

Navstar Global Positioning System (GPS) (MFP)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
4	92,605	-	75,644

The operational Navstar GPS system will consist of 18 satellites in six orbital planes and 3 on orbit spare satellites, a ground control station and approximately 20,000 sets of user equipment for all services. Users (military aircraft, ships, ground vehicles, and ground personnel) will be able to precisely determine position (to 16 meters spherical probable accuracy worldwide) and velocity (.1 meters per second), in three dimensions and unimpaired by weather anywhere in the world. GPS's positional accuracy will significantly improve the effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all services. The FY 1989 request provides for modification of satellites and ground support equipment to use the medium launch vehicle.

Space Shuttle Operations (Formerly Space Launch Support)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	108,451	-	23,620

The Space Shuttle Operations program provides funds to support Air Force operational space programs (excluding Special Missions) launched on the Space Shuttle. Operational programs include Defense Support Program, Defense Satellite Communications System, and Navstar Global Positioning System (GPS) / Nuclear Detonation (NUDET) Detection System (NDS). In FY 1989, funds are requested for support equipment for Shuttle operations at Kennedy Space Center, and necessary spares for the Inertial Upper Stage (IUS).

Defense Meteorological Satellite Program (DMSP) (MPP)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
-	71,646	1	159,313

DMSP is an advanced weather satellite system that provides timely, worldwide, high quality visible and infrared cloud imagery and other specialized meteorological, oceanographic and solar geophysical data to support DOD strategic missions. Worldwide data are provided to the Air Force Global Weather Central (Offutt AFB, Nebraska) and the Navy's Fleet Numerical Oceanography Center (Monterey, California). Local area cloud imagery data are transmitted for immediate use directly from the satellites to fixed and mobile Air Force and Navy tactical receiving terminals at key worldwide operating locations and onboard aircraft carriers at sea. FY 1988 provides for procurement of primary cloud imaging sensors. Sensors are to be procured on an annual buy basis. The FY 1989 request begins procurement of the first of five DMSP satellites on a multiyear procurement basis. This is a follow-on to the highly successful FY 1983-1986 DMSP multiyear.

Defense Support Program (DSP) (MPP)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
1	391,843	2	432,832

DSP satellites contain sensors which provide near real-time data to the National Command Authority and other designated users. Funds are requested in FY 1988 to procure the first of five satellites to be procured under a multiyear procurement program initiated with FY 1987 advance procurement funds. Funds are requested in FY 1989 to procure an additional 2 satellites under the continuing multiyear procurement.

Defense Satellite Communications System (DSCS) (MPP)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
1	71,900	-	54,412

DSCS provides Super High Frequency (SHF) satellite communications for secure voice and high data rate transmissions. It satisfies unique and vital national security communications requirements for worldwide military command and control, crises management and relay of intelligence, early warning data, treaty monitoring and surveillance information and diplomatic traffic. The DSCS program consists of a space segment, which is an Air Force responsibility, a multi-user terminal segment for ground, airborne, and (Continued)

naval elements, and an operational control segment. The authorized DSCS space segment consists of five operational and two on-orbit spare satellites positioned in geosynchronous orbits to provide global (less polar) coverage. Existing DSCS II satellites will be replenished with DSCS III satellites. DSCS III provides increased capacity, flexibility, and counter-measure capability. DSCS III satellites will include an Air Force Satellite Communications System single channel transponder for Emergency Action Message dissemination. Funding in FY 1989 provides for satellite modifications and storage costs as well as integration costs including incorporation of a boost stage for launch of the DSCS satellite on the Medium Launch Vehicle (MLV) II launch vehicle.

Space Boosters (MP)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
9	502,212	3	376,206

The Space Boosters program provides access to space for critical DOD payloads. FY 1988 provides for procurement of four Titan IV expendable launch vehicles that will be capable of launching 10,000 pound satellites into geosynchronous orbits, and procurement of kits required to modify five Titan II's to space launch vehicle configuration for launch of DMSP satellites. These systems will be used along with the Space Shuttle for providing an assured access to space for selected DOD spacecraft. The Titan IV is being procured under a multiyear contract with three launch vehicles being procured in FY 1989.

Medium Launch Vehicle (MLV)

(\$ In Thousands)			
	FY 1988	FY 1989	
QTY	AMOUNT	QTY	AMOUNT
7	210,800	8	275,300

This program provides for competitive procurement of medium launch vehicles (MLV's). The Delta II will be used to launch medium weight satellites, such as the NAVSTAR GPS into orbit. The FY 1988 budget provides for procurement of seven Delta II's. The FY 1989 request provides for the procurement of an additional six Delta II's. It also initiates procurement of the MLV II launch vehicle to launch DSCS III satellites. Two MLV II's are to be competitively procured in FY 1989.

Forest Green

(\$ In Thousands)			
<u>FY 1988</u>	<u>AMOUNT</u>	<u>FY 1989</u>	<u>AMOUNT</u>
<u>QTY</u>	<u>300</u>	<u>QTY</u>	<u>300</u>
-		-	

Information concerning this program is included in classified budget documentation material.

Special Programs

(\$ In Thousands)			
<u>FY 1988</u>	<u>AMOUNT</u>	<u>FY 1989</u>	<u>AMOUNT</u>
<u>QTY</u>	<u>2,753,900</u>	<u>QTY</u>	<u>2,849,100</u>
-		-	

Information concerning this program is included in classified budget documentation material.

Special Update Programs

(\$ In Thousands)			
<u>FY 1988</u>	<u>AMOUNT</u>	<u>FY 1989</u>	<u>AMOUNT</u>
<u>QTY</u>	<u>1,744,000</u>	<u>QTY</u>	<u>267,200</u>
-		-	

Information concerning this program is included in classified budget documentation material.

COMPARISON OF FY 1988 PROGRAM REQUIREMENTS AS REFLECTED
IN FY 1988 BUDGET WITH FY 1988 PROGRAM REQUIREMENTS AS
SHOWN IN FY 1989 BUDGET

SUMMARY OF PROGRAM REQUIREMENTS

BUDGET ACTIVITY	(In Thousands of Dollars)		Increase (+) or Decrease (-)
	Program Requirements Per 1987 Budget	Program Requirements Per 1988 Budget	
1. Ballistic Missiles	\$ 1,314,508	\$ 913,150	\$ -401,358
2. Other Missiles	3,068,490	1,973,627	-1,094,863
3. Modification of In-Service Missiles	149,798	95,175	-54,623
4. Spares and Repair Parts	224,116	164,248	-59,868
5. Other Support	5,015,781	4,203,871	-811,910
	<u>186,214</u>	<u>124,000</u>	<u>-62,214</u>
Reimbursable Program			
Total Fiscal Year Program	\$ 9,958,907	\$ 7,474,071	\$-2,484,836

EXPLANATION BY BUDGET ACTIVITY

1. Ballistic Missiles (\$-401,358). Congress reduced the Peacekeeper program by \$395,949 thousand and Replacement Equipment-Strategic by \$709 thousand. Additionally \$4,700 thousand of Replacement Equipment Strategic will be reduced to finance Space Launch Recovery actions.
2. Other Missiles (\$-1,094,863). Congress made the following adjustments (totaling \$1,082,863 thousand): AIM-7 (\$-15,000), AIM-9 (\$-19,000), AGM-130 (\$-43,745), Maverick (\$-64,605), HARM (\$-55,945), AMRAAM (\$-162,882), GQM (\$-70,792), Replacement Equipment (\$-325), and Classified Program (\$-67,560). Additional adjustments include Environmental Restoration (\$+2,500) GQM Intermediate Nuclear Forces (INF) Treaty requirements (\$+4,100), and Rapier reduction to finance Space Launch Recovery requirements (\$-18,600).
3. Modification of In-Service Missiles (\$-54,623). Congress reduced the Minuteman program by \$39,223 thousand and GQM mods by \$15,400 thousand.
4. Spares and Repair Parts (\$-59,868). Congress reduced the FY 1988 Spares and Repair Parts.

5. Other Support (\$+811,910) The decrease is a net result from Congressional actions totaling \$887,910 thousand and a reprogramming increase of \$76,000 thousand for Space Launch Recovery. Congress reduced the following programs: Space Shuttle Operations (\$-19,600), DMSP (\$-25,800), DSCS (\$-3,970), Space Defense System (\$-21,800), Medium Launch Vehicle (\$-15,300) Special Programs (\$-186,400), and Special Update Programs (\$-615,000).

Reimbursable Program Decrease is due to reduction in anticipated orders.

**COMPARISON OF FY 1988 FINANCING AS REFLECTED
IN FY 1988 BUDGET WITH FY 1988 FINANCING AS
SHOWN IN THE FY 1989 BUDGET**

	(In Thousands of Dollars)	Increase (+) or Decrease (-)
	Financing Per FY 1988 Budget	Financing Per FY 1989 Budget
Program Requirements	\$ 9,958,907	\$ 7,474,071
Program Requirements (Service Account)	(9,772,693)	(7,350,071)
Program Requirements (Reimbursable)	(186,214)	(124,000)
Less:		
Anticipated Reimbursements	186,214	124,000
Unobligated Balance from Other Accounts	-	33,200
Transfer from Other Accounts	-	26,100
Appropriation	\$ 9,772,693	\$ 7,290,771
		\$-2,481,922

EXPLANATION OF CHANGES IN FINANCING

The fiscal year 1988 program has decreased \$2,484,836 thousand since submission of the FY 1988 budget. Adjustments by category are explained below:

1. **Anticipated Reimbursements.** The decrease of \$62,214 thousand is due to an anticipated decrease in customer orders.
2. **Unobligated Transfer from Other Accounts.** An amount of \$33,200 thousand is being applied to the Space Launch Recovery effort.

3. Transfer from Other Accounts. The following transfers from other accounts have taken place: \$19,500 thousand was added for Space Launch Recovery, \$2,500 thousand was added as part of the Environmental Restoration program, and \$4,100 thousand was added to finance GOM INF Treaty requirements.
4. Appropriation. A decrease of \$2,481,922 thousand results from Congressional adjustments to the FY 1988 Budget request.

**COMPARISON OF FY 1987 PROGRAM REQUIREMENTS AS REFLECTED
IN FY 1988 BUDGET WITH FY 1987 PROGRAM REQUIREMENTS AS
SHOW IN FY 1989 BUDGET**

SUMMARY OF PROGRAM REQUIREMENTS

BUDGET ACTIVITY	(In Thousands of Dollars)		
	Program Requirements Per 1988 Budget	Requirements Per 1989 Budget	Increase (+) or Decrease (-)
1. Ballistic Missiles	\$ 1,149,595	\$ 1,140,699	\$ -8,896
2. Other Missiles	2,317,856	2,281,674	-36,182
3. Modification of In-Service Missiles	137,290	138,840	+1,550
4. Spares and Repair Parts	291,431	295,827	+4,396
5. Other Support	4,154,546	4,097,344	-57,202
Reimbursable Program	<u>548,594</u>	<u>86,345</u>	<u>-462,249</u>
Total Fiscal Year Program	\$ 8,599,312	\$ 8,040,729	\$ -558,583

EXPLANATION OF CHANGES BY BUDGET ACTIVITY

1. Ballistic Missiles (\$-8,896) Reflects a below threshold reprogramming to spares (\$3,596 thousand) a transfer to Military Personnel (\$6,300 thousand), and a increase from other missiles (\$1,000 thousand).
2. Other Missiles (\$-36,182) The reduction is a net result of the following adjustments: Transfer to FY 1988 to finance Space Launch Recovery efforts (\$-9,600 thousand), \$12,000 thousand is for a classified reprogramming to Other Procurement, \$1,550 thousand is for reprogramming to modifications, \$800 thousand to spares and repair parts, \$500 thousand to Military Personnel, \$10,000 thousand threshold to the Defense Environmental Fund, \$1,000 thousand to Aircraft Procurement.
3. Modification of In-Service Missiles (\$+1,550) The increase results from a below threshold reprogramming.

4. Spares and Repair Parts (\$4,396) Reflects a reprogramming from Ballistic Missiles (\$3,596) and from Other Missiles (\$800 thousand).
 5. Other Support (\$-47,202) The reduction includes rescissions of Medium Launch Vehicle funding (\$40,100 thousand), Space Shuttle Operations (\$11,500 thousand), transfer to subsequent years (\$18,102 thousand) to finance FY 1988 Space Booster requirements, and a transfer from RDT&E (\$12,500 thousand).
- Reimbursable Program (\$-462,249). Program has changes to reflect actual reimbursable orders.

COMPARISON OF FY 1987 FINANCING AS REFLECTED
IN FY 1988 BUDGET WITH FY 1987 FINANCING AS
SHOWN IN FY 1989 BUDGET

		(In Thousands of Dollars)	
		Financing Per FY 1988 Budget	Increase (+) or Decrease (-)
Program Requirements		\$8,599,312	\$8,040,729
Program Requirements (Service Account)		(8,050,718)	(7,954,384)
Program Requirements (Reimbursable)		(548,594)	(86,345)
Less:			
Anticipated Reimbursements		548,594	86,345
Transfer from Other Accounts		3,000	3,000
Unobligated Balance from Other Accounts		602,000	602,000
Reprogramming from prior Budget Plans		-	12,500
Add:			
Unobligated to Finance Subsequent year budget plans		-	92,234
Transfer to Other Accounts		1,000	17,600
Appropriation		\$7,446,718	\$7,446,718
			\$ -

EXPLANATION OF CHANGES IN FINANCING

The FY 1987 program has decreased \$558,583 thousand since submission of the FY 1988 Budget. Adjustments by category of financing are explained below:

1. Anticipated Reimbursements. An decrease of \$462,249 thousand is due to decreases in anticipated customer orders.
2. Transferred from Other Accounts. An increase of \$12,500 thousand as a result of the FY 1987 Reprogramming for Space Boosters.
3. Unobligated to Finance Subsequent Budget Years. Congress rescinded a total of \$51,600 thousand. \$27,702 thousand was transferred to finance future year Space Launch Recovery efforts and various transfers totaling \$13,932 thousand were made from the account to finance subsequent years.
4. Transferred to Other Accounts. Transfers totaling \$16,600 were made to include transfers to the Defense Environmental Restoration fund (\$10,000 thousand), and Military Personnel (\$6,600 thousand).

1 COMPONENT USAF	FY 19-89 FACILITY PROJECT DATA			2 DATE 31 Jul 87	
3 INSTALLATION AND LOCATION APP 78, Morton Thiokol Inc. Brigham City, UT		4 PROJECT TITLE MPC 7000 Waste Minimization			
5 PROGRAM ELEMENT 78011F	6 CATEGORY CODE 222-227	7 PROJECT NUMBER	8 PROJECT COST (50000) \$3,000		
9 COST ESTIMATES					
ITEM	UNIT	QUANTITY	UNIT COST	COST (50000)	
Construct a Wastewater Treatment Facility		L/S		3,000	
10. DESCRIPTION OF PROPOSED CONSTRUCTION					
<p>A treatment facility will be constructed to treat wastewater from AF Plant 78 operations generating waste propellants, ammonium perchlorate, and organic solvents. This waste is currently hauled to the adjacent Morton Thiokol property and placed in unlined impoundments and burned. The proposed facility will eliminate the current land disposal of the hazardous waste. Fiscal Year (FY) 87 effort is for Architectural and Engineering (A&E). FY88 is for long-lead procurement and FY89 is for construction.</p>					
<p>BASIS OF NEED: The existing arrangement will be unlawful after Nov 88. Treating wastewater generated by AF Plant 78 on the premises is preferable to disposal on Morton Thiokol property because Air Force liability would be limited. Further installing double liners in the existing impoundments is not feasible because of the need to burn an explosive mixture. Even more importantly, the Hazardous and Solid Waste Amendments (HSWA-1984) to the Resource Conservation and Recovery Act (RCRA) require banning of land disposal of hazardous waste unless the Environmental Protection Agency (EPA) determines such a ban is not required to protect human health and the environment. The fiscal ban would occur in 1990. Given today's environmental consciousness, a "safe" determination does not appear likely.</p>					
<p>IMPACT IF NOT PROVIDED: Generation of wastewater would have to be terminated 30 Nov 88 under threat of enforcement action. Manufacturing operations would have to be curtailed.</p>					

1 COMPONENT USAF	FY 1989 FACILITY PROJECT DATA			2 DATE 31 JULY 1987
3 INSTALLATION AND LOCATION AFP 78, MORTON THIOKOL INC BRIGHAM CITY UT		4 PROJECT TITLE MPC 7000 UNDERGROUND TANK REPLACEMENT		
5 PROGRAM ELEMENT 78011F	6 CATEGORY CODE 222-227	7 PROJECT NUMBER	8 PROJECT COST (\$000) \$122.0	
9 COST ESTIMATES				
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
Replace Underground Tanks		L/S		\$122.0
10 DESCRIPTION OF PROPOSED CONSTRUCTION In accordance with Air Force policy, five (5) underground storage tanks in AF Plant 78 need to be replaced with double-walled tanks or placed above ground with proper containment provisions.				
<u>BASIS OF NEED:</u> The need for replacement of these tanks is made more urgent by recent environmental regulations concerning leaking underground tanks. Closure of any of these tanks would severely impact the existing storage capacity and could impede plant operations.				
<u>IMPACT IF NOT PROVIDED:</u> Failure to accomplish this project will result in inventory loss, willful contamination of the environment and possible civil and/or criminal penalties. Noncompliance with regulatory requirements could result in enormous fines plus decontamination costs should underground storage tank leaks occur.				

1 COMPONENT USAF	2 DATE 31 JULY 1987			
3 INSTALLATION AND LOCATION AFP 44, HUGHES AIRCRAFT CO.		4 PROJECT TITLE MPC 1000 FORKLIFT MAINTENANCE FACILITY		
5 PROGRAM ELEMENT 78011F	6 CATEGORY CODE 222-222	7 PROJECT NUMBER	8 PROJECT COST (5000) \$236.0	
9 COST ESTIMATES				
ITEM Provide New Forklift Maintenance Facility	UNIT L/S	QUANTITY	UNIT COST	COST (5000) \$236.0
10 DESCRIPTION OF PROPOSED CONSTRUCTION Provide an approximate 2400 SF facility consisting of two (2) maintenance bays and one (1) cleaning bay. Facility shall be complete with all supporting utilities.				
<p><u>BASIS OF NEED:</u> The existing equipment maintenance facilities in Building 833 are overcrowded and inadequate to handle the fleet of vehicles currently operating at AF Plant 44. During previous production years, the rolling stock consisted of approximately eighty (80) vehicles, and the building was expanded to accommodate these needs. The current rolling stock consists of two hundred thirty (230) vehicles with a projected sixteen (16) additional vehicles through 1989. With continued increasing programs, more vehicles will be required to efficiently support production demands. The present equipment maintenance facilities have been overcrowded for the past four (4) years, and conditions are rapidly becoming worse. The construction of the forklift maintenance facility will alleviate the overcrowding within Building 833 by removing the forklift repair bay from the building. This will allow for future expansion of Building 833.</p> <p><u>IMPACT IF NOT PROVIDED:</u> Failure to accomplish this project will result in continued operation of a totally inadequate facility, tremendous lack of required space, both now and in the future, and the subsequent impact to both equipment life, maintenance costs, and downtime affecting the ability of transportation to meet the growing demands of production at AF Plant 44.</p>				